

Human immunodeficiency virus polyarthropathy

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ABSTRACT

Articular manifestations are a frequent but often underdiagnosed manifestation in patients infected with the human immunodeficiency virus (HIV). We present a 7-year-old HIV-infected malnourished girl who presented with recurrent joint pain and effusion in the left knee joint. Her antistreptolysin O, dsDNA, antinuclear antibody and rheumatoid arthritis factor were negative. She responded to antiretroviral therapy.

Keywords: Arthropathy, human immunodeficiency virus, pediatric

Introduction

Although articular manifestations due to human immunodeficiency virus (HIV) infection are relatively uncommon, many rheumatic manifestations have been reported ranging from 4% to 71.3% in their prevalence.^[1] In a prospective study of 74 consecutive HIV-positive patients, arthralgias were found in (45%), arthritis in (10%), and Reiter's syndrome in (8%).^[1] The data on the occurrence of HIV arthropathy in the pediatric age group is sparse, the first case in India being reported in 2003.^[2] The various causes of the HIV arthropathy include arthralgia, spondyloarthropathies (SpA), reactive arthritis (Reiter's syndrome), psoriatic arthritis, HIV-associated arthritis, and septic arthritis.^[3]

Case Report

A 7-year-old girl presented with back pain 6 months ago that responded to some medication within 15 days. She again had back pain and pain in both knees for past 1 month. She was hospitalized for same, and ultrasound of left knee showed small loculated pocket of the fluid collection on medial and lateral aspect of left knee joint. X-ray spine was normal. She was detected to be HIV

infected by ELISA and was referred for further management. On examination, she was malnourished (weight = 13 kg), had pallor, oral thrush, and left knee effusion with bilateral ankle joint swelling with arthralgia. There was no organomegaly. Both parents were also tested for HIV and both had a positive ELISA test. The child's CD4 count was 131 cells/cumm (11.9%). Her antistreptolysin O was negative. Antinuclear antibody, dsDNA and rheumatoid arthritis factor were also negative. She was started on antiretroviral therapy (ART) consisting zidovudine (AZT), lamivudine (3TC), and efavirenz along with ibuprofen to which she responded in 2 months and was on regular follow-up. After 1 year of ART, her CD4 count was 673 cells/cumm (45.9%) with CD4:CD8 of 0.92.

Discussion

Usual signs and symptoms of pediatric HIV infection include recurrent and severe occurrences of bacterial, viral, and fungal infections such as pneumonia, candidiasis, disseminated herpes simplex, and tuberculosis. Furthermore, observed are growth failure, cachexia, failure to attain typical milestones, behavioral abnormalities such as loss of concentration and memory.^[4]

In studies conducted in a prospective design with patients examined by rheumatologists, a conclusively high prevalence (70%) of

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articular involvement associated with HIV was found. Several apparently distinct forms of arthritis have been described in HIV patients. The pathophysiology of arthritis in HIV-infected patients is not yet completely understood, but a direct role of the HIV on the initiation of synovitis is suspected in some of them.^[5]

Arthralgia is a common manifestation of HIV infection, and it may occur at any stage of the HIV infection and frequently oligoarticular.^[3] The joints most commonly involved are the knees, shoulders and the elbows. SpAs have been reported as one of the commonest manifestations of HIV infection and include reactive arthritis/Reiter's syndrome, psoriatic arthritis, and undifferentiated SpA. Studies among Caucasians have been associated with a positive human leukocyte antigen (HLA) B27 in 70–80% of patients while the HLA B27 is usually negative in studies from Africa.^[3]

Our patient had HIV-associated arthritis as the child had all negative autoimmune markers and the child responded to ART.

The major risk factor for the development of septic arthritis in HIV-positive patients was related to the intravenous drug abuse, rather than the HIV infection itself. The most common organisms were *Staphylococcus aureus* and the Streptococcal species. Infections with fungal species and atypical mycobacteria usually occurred late in the course of the disease when the CD4 count was $<100/\text{mm}^3$.^[3]

Most of these conditions respond to symptomatic treatment with analgesics and nonsteroidal anti-inflammatory drugs and usually, settle with the use of ART (as seen in our patient).^[3]

Conclusion

Musculoskeletal manifestations although reported in the adult age group have hardly ever been reported in the pediatric age group with Reiter's syndrome being the commonest presentation. Physical and rehabilitative therapy is needed to maintain the range of motion and strengthen muscle function in addition to administration of drugs in the management of HIV-associated polyarthropathy.

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Conflicts of interest

There are no conflicts of interest.

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